REMARKS

The comments of the applicant below are each preceded by related comments of the examiner (in small, bold type).

> **5. *Claims 1-2,4-9, 11-19, 21,32, 35, and 44-47 are rejected under 35 U.S. C. 102(b) as being anticipated by Hoppie (US Patent 6,039,014).***
>
> **Hoppie discloses an electromagnetic actuator (See Figs 1-5, and 7), comprising: a stator assembly (50; 120; 164) having an inner surface that defines an opening, the stator assembly comprising: a coiled conductor (52; 126; 162) disposed near the inner surface of the stator assembly, wherein the coiled conductor is adapted to generate a first magnetic field when current is applied; a center pole formed of a material (60; 118; 192) having high magnetic permeability and having a longitudinal axis; and an armature assembly (56; 112; 174) at least partially disposed within the stator assembly opening, the armature assembly comprising: a permanent magnet (58; 116; 190), wherein the armature assembly moves in a direction parallel to the longitudinal axis of the center pole when current is applied to the coiled conductor assembly;**
>
> ***
>
> **Furthermore, regarding the Attorney's contention "a center pole formed of material having high magnetic permeability," a feature absent from the reference " (e.g., See Page 4, Attorney's Remarks), the Examiner disagrees. As a matter of fact, the Hoppie reference discloses a center pole formed of a ferromagnetic material (60; 118; 192), ... in addition, it is also admitted in this instant application, " a material having high magnetic permeability (e.g., a ferromagnetic or paramagnetic material) " (See line 11 through line 12, Page 1 of the Specification). Accordingly, the Examiner would deem that either one of the Hoppie reference, the Grundl reference, or the Kawamura reference teaches a center pole formed of material having high magnetic permeability.** (office action)
>
> **Continuation of 13. Other: The applicants' arguments filed on 0110912006 have been fully considered but they are not persuasive. Regarding the 35 USC 102 rejections to claims 1 , 44, and 48, the Examiner deems that the Hoppie reference discloses a center pole (60; 118; 192), the Grundl reference teaches a center pole (18", 18"').** (advisory action)

Claim 1 has been amended to recite that the center pole is "stationary relative to the stator assembly." Without conceding that the elements pointed out by the examiner as the center pole in Hoppie are in fact a center pole, those elements are clearly part of the moving valve stem assembly (see col. 4, ll. 19-22). Hoppie does not describe and would not have made obvious a stator assembly that is "stationary relative to [a] center pole."

> ***6. Claims 1-2,409, 11-19, 21, 25-26, 31-32, and 35 are rejected under 35 U.S.C. 102(e) as being anticipated by Grundl et al. (US Patent 6,755,161).***
>
> **Grundl discloses an electromagnetic actuator (See Figs 1 -6), comprising: a stator assembly (40) having an inner surface that defines an opening, the stator assembly**

> **comprising: a coiled conductor (1 8', 28) disposed near the inner surface of the stator assembly, wherein the coiled conductor is adapted to generate a first magnetic field when current is applied; a center pole (18", 18"') formed of a material having high magnetic permeability and having a longitudinal axis; and an armature assembly (16) at least partially disposed within the stator assembly opening, the armature assembly comprising: a permanent magnet (30), wherein the armature assembly moves in a direction parallel to the longitudinal axis of the center pole when current is applied to the coiled conductor assembly;**
>
> ***
>
> **the Grundl reference discloses a center pole formed of a soft magnetic form body 18", 18"' (See Col. 9, line 64 through line 66),**

Claim 1 has been amended to recite that the armature assembly is "at least partially disposed within the coiled conductor and the stator assembly opening." In contrast, Grundl's "stator coil 28" is disposed either inside the rotor 16 (see Figs. 1, 3) or entirely outside it (see Figs. 2a, 2b). In no case is Grundl's rotor *within* any of the coils. Thus, Grundl does not disclose, and would not have made obvious, "an armature assembly at least partially disposed within [a] coiled conductor."

> **8. *Claims 1-2, 4-9, 11-16, 19, 21, 32, 35, and 44-47 are rejected under 35 U.S.C. 102(b) as being anticipated by Kawamura (US Patent 5,124,598).***
>
> **Kawamura discloses an electromagnetic actuator (See Figs1 -2), comprising: a stator assembly (3) having an inner surface that defines an opening, the stator assembly comprising: a coiled conductor (36-39) disposed near the inner surface of the stator assembly, wherein the coiled conductor is adapted to generate a first magnetic field when current is applied; a center pole (71) formed of a material having high magnetic permeability and having a longitudinal axis; and an armature assembly (22, 23) at least partially disposed within the stator assembly opening, the armature assembly comprising: a permanent magnet (2), wherein the armature assembly moves in a direction parallel to the longitudinal axis of the center pole when current is applied to the coiled conductor assembly;**
>
> ***
>
> **and the Kawamura reference discloses a center magnetic pole 71,** (office action)
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> **Additionally, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., In claim 1 the pole is a structural element. (An example is set forth in applicant's specification at p. 6, 11. 23-25: " the center pole 28 is a hollow, tube-like structure that extends beyond the outer housing 29 and acts as a guide for a valve stem . . . attached to the armature assembly")) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See In re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).** . (advisory action)

With regard to the pole being a structural element, it was not the applicant's intent to suggest that "limitations from the specification [be] read into the claims." The applicant was

merely pointing out that "pole" has two completely different meanings, one structural and one electromagnetic. It is clear from the language of claim 1 that the "center pole" is a physical object. The applicant referred to the specification merely to demonstrate that it is unambiguous that the claims use "pole" in this structural sense, while Kawamura uses it in its electromagnetic sense. The plain meaning of "pole," informed by the specification as to which plain meaning is used in the claims, makes clear that Kawamura does not disclose a "center pole formed of a material having a high magnetic permeability."

> **7.** ***Claims 48-52 are rejected under 35 U.S. C. 1 O2(b) as being anticipated by Hoppie (US Patent 6,039,014).***
>
> **Hoppie discloses ... a center pole formed of a material (60; 118; 192) having high magnetic permeability and having a longitudinal axis ...**
>
> **9.** ***Claims 48-52 are rejected under 35* U.S.C. *102(b) as being anticipated by Kawamura* (US *Patent 5,124,598).***
>
> **Kawamura discloses ... a center pole (71) formed of a material having high magnetic permeability and having a longitudinal axis ...** (office action)

Claims 48 has been amended and is patentable for at least the same reasons for which claim 1 is patentable. Claims 49 through 52 and all other dependent claims are patentable for at least the reasons for which the claims on which they depend are patentable.

Enclosed is a $450 check for the Petition for Extension of Time fee. Please apply any charges or credits to deposit account 06-1050, Order No. 02103-212001.

Respectfully submitted,

Date: 2/22/6

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